WHAT IS CLAIMED IS:

1. A process for removing an organic ARC on a metallic layer comprising exposing the ARC to an oxygen-free system of etching agents in an ionized state in a reaction chamber of a plasma generating device, the system of etching agents including one or more fluorine-containing compounds, chlorine and an optional inert carrier gas.

2. The process of Claim 1, wherein the one or more fluorine-containing compounds is selected from the group consisting of CF_4, CHF_3, C_2F_6, CH_2F_2, SF_6, and C_nF_{n+4}.

3. The process of Claim 1, wherein the ARC is exposed by channels forming an interconnecting network previously etched in a photoresist covering the ARC.

4. The process of Claim 1, wherein the system of etching agents consists essential of CHF_3, Ar, and Cl_2.

5. The process of Claim 4, carried out within the following window:

Pressure	--	about 1 to about 100 millitorr
Temperature	--	about 30° to about 80° C
Cl_2 flow	--	about 5 to about 60 sccm
Ar flow	--	about 5 to about 80 sccm
CHF_3 flow	--	about 5 to about 80 sccm.

6. The process of Claim 3, wherein the ARC on the metallic layer has been used to prevent actinic light passing completely through the photoresist from being reflected from the metallic layer back through the photoresist during the photo etching process.

7. The process of Claim 1, wherein the plasma generating device is evacuated to a pressure below 100 mTorr while etching the ARC with the etching agents.

8. The process of Claim 1, wherein the plasma generating device comprises an ECR reactor and the ARC is on a semiconductor substrate.

9. The process of Claim 1, wherein the ARC is on a semiconductor wafer.

10. The process of Claim 1, wherein the plasma generating device includes an antenna which forms the plasma by inductively coupling radio frequency energy into the reaction chamber.

11. A method for substantially preserving a photoresist while removing exposed areas of an organic ARC during the manufacturing of an integrated circuit comprising exposing the ARC to a system of etching agents in an ionized state in a reaction chamber of a plasma generating device, the system of etching agents including one or more fluorine-containing compounds, an inert carrier gas and chlorine.

12. The method of Claim 11, wherein the one or more fluorine-containing compounds is trifluoromethane and the inert carrier gas is argon.

13. The method of Claim 12, carried out within the following window

Pressure	--	about 1 to about 100 millitorr
Temperature	--	about 30° to about 80° C
Cl_2 flow	--	about 5 to about 60 sccm
Ar flow	--	about 5 to about 80 sccm
CHF_3 flow	--	about 5 to about 80 sccm.

14. An oxygen-free plasma etching gas formulation for removing an organic ARC on a metallic layer comprising one or more fluorine-containing compounds, an optional inert carrier gas and chlorine.

15. The formulation of Claim 14, wherein the one or more fluorine-containing compounds is CHF_3 and the inert carrier gas is argon.